UNITED STATES PATENT AND TRADEMARK OFFICE

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10/749,617	12/30/2003	Nikolai G. Nikolov	6570P041	9855

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SAP/BLAKELY	DAO, THUY CHAN
1279 OAKMEAD PARKWAY	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *04/19/07*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on April 19, 2006 has been entered.

2. Claims 1-34 have been examined.

Information Disclosure Statement

3. The Office acknowledges receipt of the Information Disclosure Statement filed on April 19, 2007. It has been placed in the application file and the information referred to therein has been considered by the examiner.

Response to Amendments

4. Per Applicants' request, claims 1 and 18-34 have been amended.

5. The objection to the specification is withdrawn in view of Applicants' amendments.

6. The 35 USC §101 rejection over claims 18-34 is withdrawn in view of Applicants' amendments.

Response to Arguments

7. The Applicant is thanked for a thorough reply. Applicant's arguments have been fully considered. However, they are not persuasive.

a) The Applicant asserted, " *The Applicant respectfully submits that the wording of the Applicant's claims includes the limitation that the identification of the plug-in module occurs <u>after</u> the class containing the instrumented method has been loaded. By contrast, the Avakian reference is clearly limited to teaching identification of the plug-in module during the loading of the class that contains the instrumented method*" (Remarks, page 23, lines 21-25, originally emphasized).

As an initial matter, per US Patent Publication 2005/0039171 A1 (the reference Avakian), paragraphs [0095]. [0066], [0119], and [0122] cited by the Applicants are considered to read as [0096], [0067], [0120], and [0123], respectively.

The examiner respectfully disagrees with Applicant's assertions. All the Figures 2, 3 and paragraphs [0096], [0067], [0120], and [0123] are directed to *"events occurring at Class-Load Time"* (cited by the Applicant, page 24, line 14, emphasis added), *"when the instrumented class is initialized"* (cited by the Applicant, page 24, line 6, emphasis added), and *"before any methods in the instrumented class are called"* (cited by the Applicant, page 24, line 8, emphasis added). That is to say, in the cited paragraphs above, Avakian indeed discloses identifying a plug-in module <u>for an instrumented class</u> <u>during</u> class-load time and/or at execution time (emphasis added).

In contrast, the plain language of independent claims 1 and 18 only calls for *"a) invoking a second method from a first method, ..., b) identifying a plug-in module for said first method... containing a handler method, c) executing said handler method ... "* (e.g., claim 1, lines 3-10, identifying a plug-in module <u>for a particular method at execution time</u>, e.g., during class-load time, emphasis added).

Accordingly, Applicant's arguments are not persuasive.

b) The Applicant asserted, *"Thus, the Applicant respectfully submits that Avakian fails to anticipate the Applicants claims because the Applicant's claims recite identification of a plug-in instrument for a method after the method's class loading has been performed but Avakian only discloses identification of a plug-in module for a method during the method's class loading"* (Remarks, page 24, lines 19-23).

The examiner respectfully disagrees with these assertions. Avakian also explicitly discloses *in an object oriented run-time environment,* <u>*after*</u> *a class has been loaded* (e.g., FIG. 3, class C' has been instrumented and loaded by Class Loader 30, [0060], [0064], emphasis added):

a) invoking a second method from a first method (e.g., FIG. 7, second method as item 702, first method as item 700, [0096-0097]),

said first method belonging to said class (e.g., FIG. 7, said first method `"public TradeResult buy(String string, int i)"` belongs to class C', which has been instrumented and loaded at class-load time, [0095], [0097-0098]),

said invoking comprising providing an identification of said first method and said class (e.g., FIG. 7, second method 702 comprising an identification of said first method and said class as illustrated in FIG. 10, items 1002 and 1004, [0113] and FIG. 9, items 900 and 920, [0110-0111]);

b) identifying a plug-in module for said first method based upon said identification (e.g., FIG. 2-3, Plug-In Instrument 27A-B, [0054], [0059], [0064-0066]; FIG. 7, line 8, second method 702 returns corresponding identification to `"object"`),

said plug-in module containing a handler method (e.g., FIG. 7, lines 9-13, if `(object != null)` then executing handler methods).

Accordingly, Applicant's arguments are not persuasive. The examiner respectfully maintains ground of rejection over claims 1-34.

Claim Rejections – 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-3, 5-20, and 22-34 are rejected under 35 U.S.C. 102(e) as being unpatentable over Avakian (art of record, US Patent Publication No. 2005/0039171 A1).
Claim 1:

Avakian discloses *a method, comprising: in an object oriented run-time environment, after a class has been loaded* (e.g., FIG. 3, class C' has been instrumented and loaded by Class Loader 30, [0060], [0064]):

a) invoking a second method from a first method (e.g., FIG. 7, second method as item 702, first method as item 700, [0096-0097]),

said first method belonging to said class (e.g., FIG. 7, said first method `"public TradeResult buy(String string, int i)"` belongs to class C', which has been instrumented and loaded at class-load time, [0095], [0097-0098]),

said invoking comprising providing an identification of said first method and said class (e.g., FIG. 7, second method 702 comprising an identification of said first method and said class as illustrated in FIG. 10, items 1002 and 1004, [0113] and FIG. 9, items 900 and 920, [0110-0111]);

b) identifying a plug-in module for said first method based upon said identification (e.g., FIG. 2-3, Plug-In Instrument 27A-B, [0054], [0059], [0064-0066]; FIG. 7, line 8, second method 702 returns corresponding identification to `"object"`),

said plug-in module containing a handler method (e.g., FIG. 7, lines 9-13, if (`object != null`) then executing handler methods);

c) executing said handler method to report and/or record information about said first method (e.g., page 4, [0065-0066]); *and*

d) executing said first method from a point beyond where said second method was invoked (e.g., FIG. 7, after executing second method 702 at line 8, executing 700→714→701, which is the first method belonging to said class C', [0095-0098]).

Claim 2:

The rejection of claim 1 is incorporated. Avakian also discloses *said executing of said handler method causes an entry time for said first method to be recorded* (e.g., page 11, [0144]).

Claim 3:

The rejection of claim 1 is incorporated. Avakian also discloses *said executing of said handler method causes an exit time for said first method to be recorded* (e.g., page 11, [0145]).

Claim 5:

The rejection of claim 1 is incorporated. Avakian also discloses *said executing of said handler method causes an input parameter value of said first method to be recorded* (e.g., page 4, [0065]).

Claim 6:

The rejection of claim 1 is incorporated. Avakian also discloses *said executing of said handler method causes a returned value of said first method to be recorded* (e.g., page 4, [0066]).

Claim 7:

The rejection of claim 1 is incorporated. Avakian also discloses *said first method is a constructor* (e.g., page 5, [0073]).

Claim 8:

The rejection of claim 1 is incorporated. Avakian also discloses *creating, prior to said invoking, an object having an input parameter value of said first method* (e.g., page 4, [0065]).

Claim 9:

The rejection of claim 1 is incorporated. Avakian also discloses *said invoking further comprises providing an input parameter value of said first method* (e.g., page 4, [0064]).

Claim 10:

The rejection of claim 1 is incorporated. Avakian also discloses *said invoking further comprises identifying where said first method's instructions can be found in memory* (e.g., page 4, [0065]).

Claim 11:

The rejection of claim 1 is incorporated. Avakian also discloses *after said executing said first method from a point beyond where said second method was invoked*

invoking a third method from said first method because said first method is about to reach an exit point, said second method having been invoked from said first method because an entry point of said first method had just been reached; re-identifying said plug-in module for said first method as a consequence of said invoking a third method (e.g., page 3, [0051]; page 4, [0065]);

re-executing said handler method to report and/or record information about said first method; and executing a remaining portion of said first method through said exit point (e.g., page 5, [0066]).

Claim 12:

The rejection of claim 1 is incorporated. Avakian also discloses *after said executing said first method from a point beyond where said second method was invoked:*

flowing from said first method to a third method; invoking said second method from said third method, said invoking comprising providing an identification of said third method and a second class that said third method is a part of; identifying said plug-in module for said third method based upon said third method and second class identification (e.g., page 5, [0066]; page 3, [0051]);

executing said handler method to report and/or record information about said third method; and executing a portion of said third method from a point beyond where said second method was invoked (e.g., page 4, [0065]).

Claim 13:

The rejection of claim 12 is incorporated. Avakian also discloses *identifying a second plug-in module for said third method based upon said third method and second class identification, said second plug-in module containing a second handler method* (e.g., page 3, [0051]).

Claim 14:

The rejection of claim 13 is incorporated. Avakian also discloses *executing said second handler method to report and/or record different information about said third method than what said first handler method reported and/or recorded about said third method* (e.g., page 4, [0065]).

Claim 15:

The rejection of claim 14 is incorporated. Avakian also discloses *a first object is called to execute said first method and a second object is called to execute said third method* (e.g., page 5, [0066]).

Claim 16:

The rejection of claim 15 is incorporated. Avakian also discloses *said object oriented run-time environment is a Java object oriented environment* (e.g., page 3, [0051]).

Claim 17:

The rejection of claim 1 is incorporated. Avakian also discloses *said invoking further comprises providing said first method's signature, said first method's signature comprising: said identification of said first method; said identification of said class that said first method is a part of; and said first method's arguments* (e.g., page 4, [0064]).

Claims 18-20 and 22-34:

Claims 18-20 and 22-34 recite the same limitations as those of claims 1-3 and 5-17, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claims, it also teaches all of the limitations of claims 18-20 and 22-34.

Claim Rejections – 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avakian in view of Hibbeler (art of record, US Patent No. 7,093,234 B2).

Claim 4:

The rejection of claim 1 is incorporated. Avakian does not explicitly disclose *said executing of said handler method causes a counter maintained for said first method to be incremented.*

However, in an analogous art, Hibbeler further discloses *said executing of said handler method causes a counter maintained for said first method to be incremented* (e.g., col.8: 6-10).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Hibbeler into that of Avakian. One would have been motivated to do so to profile suspected hot spots or bottlenecks in the target application as suggested by Hibbeler (e.g., col.3: 11-35).

Claim 21:

The rejection of claim 18 is incorporated. Claim 21 recites the same limitations as those of claim 4, wherein all claimed limitations have been addressed and/or set forth

above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 21.

Conclusion

12. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be reached on the first Monday of the bi-week, and every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.
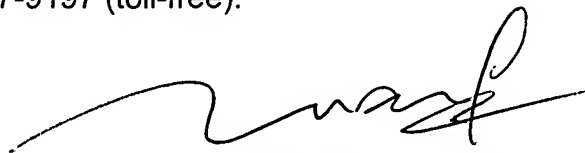
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao

TUAN DAM
SUPERVISORY PATENT EXAMINER